Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. Claim 1 (original): A thermal interface material comprising:

a polymer matrix having a thermally conductive first face and an opposite thermally conductive second face; and

a plurality of carbon nanocapsules incorporated in the polymer matrix.

Claim 2 (original): The thermal interface material as recited in claim 1, wherein the polymer is generally a reaction product of a polyether polyol and an isocyanate.

Claim 3 (original): The thermal interface material as recited in claim 2, wherein a molecular weight of the polyether polyol is in the range from 500 to 5000.

Claim 4 (original): The thermal interface material as recited in claim 2, wherein a functionality of the polyether polyol is in the range from 3 to 9.

Claim 5 (original): The thermal interface material as recited in claim 2, wherein a molecular weight of the isocyanate is in the range from 200 to 800.

Claim 6 (original): The thermal interface material as recited in claim 2, wherein a functionality of the isocyanate is in the range from 2 to 6.

Claim 7 (canceled)

Claim 8 (original): The thermal interface material as recited in claim 1, wherein the carbon nanocapsules are enclosed with thermally conductive material.

Claim 9 (original): The thermal interface material as recited in claim 8, wherein the thermally conductive material comprises indium and/or copper.

Claim 10 (original): The thermal interface material as recited in claim 1, wherein the carbon nanocapsules are filled with metal nano-grains.

Claim 11 (currently amended): The thermal interface material as recited in claim 10, wherein the metal nano-grains comprise silver, copper and/or phosphor ~~bronze.~~ bronze.

Claim 12 (withdrawn): An electronic assembly comprising:

a heat resource defining a first plane;

a heat sink defining a second plane immediately opposite to and parallel to said first plane;

a thermal interface material sealing a gap between said first and second planes;

wherein said thermal interface material is essentially composed of a plurality of carbon nanocapsules embedded within a solid polymer matrix.

Claim 13 (withdrawn): The electronic assembly as recited in claim 12, wherein a diameter of each carbon nanocapsule is in the range from 5 to 50nm.

Claim 14 (withdrawn): The electronic assembly as recited in claim 12, wherein the carbon nanocapsules are covered with a thermally conductive material.

Claim 15 (withdrawn): The electronic assembly as recited in claim 14, wherein the thermally conductive material comprises indium and/or copper.

Claim 16 (withdrawn): The electronic assembly as recited in claim 12, wherein the carbon nanocapsules are filled with metal nano-grains.

Claim 17 (withdrawn): The electronic assembly as recited in claim 16, wherein the metal nano-grains comprise silver, copper and/or phosphor bronze .

Claim 18 (withdrawn): A method of making an electrical assembly comprising:

providing a first plane obtaining heat from a heat source;

providing a second plane oppositely parallel to said first plane for transferring said heat to a heat sink; and

providing a thermal interface material sealing a gap between said first and second planes for transferring said heat from the first plane to the second plane; wherein

said thermal interface material comprises a plurality of carbon nanocapsules embedded in a solid while resiliently compressed material layer.

Claim 19 (withdrawn): The assembly recited in claim 18, wherein said layer is

defined by a polymer matrix.

Claim 20 (new): The thermal interface material as recited in claim 8, wherein a diameter of each carbon nanocapsule is in the range from 5 to 50nm.